

FOR COPY PURPOSES

"1090A MANUAL"



MODEL 1090 DIGITAL OSCILLOSCOPE

SCHEMATICS AND WIRING TABULATIONS

See Pages

26 + 27

for I/O

Nicolet Instrument Corporation
5225 Verona Road
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MODEL 1090 TABULATIONS AND SCHEMATICS

I. CIRCUIT DIAGRAMS

Capacitance values shown are in picofarads unless otherwise indicated.

Signals labeled with a minus sign are at essentially ground potential for "yes, " and at about +3.5 volts for "no. " For example, the signal RM- is at ground during the command RM (reset M). Signals without the minus sign suffix are active high.

II. WIRING TABULATIONS

The interconnections between panel, circuit boards, and connectors are shown in the wire wrap tabulations which follow. The signal names given for each wire are identifiable by consulting the associated circuit diagrams. In those diagrams, signals whose acronyms are enclosed in a box are signals which enter or leave the circuit boards.

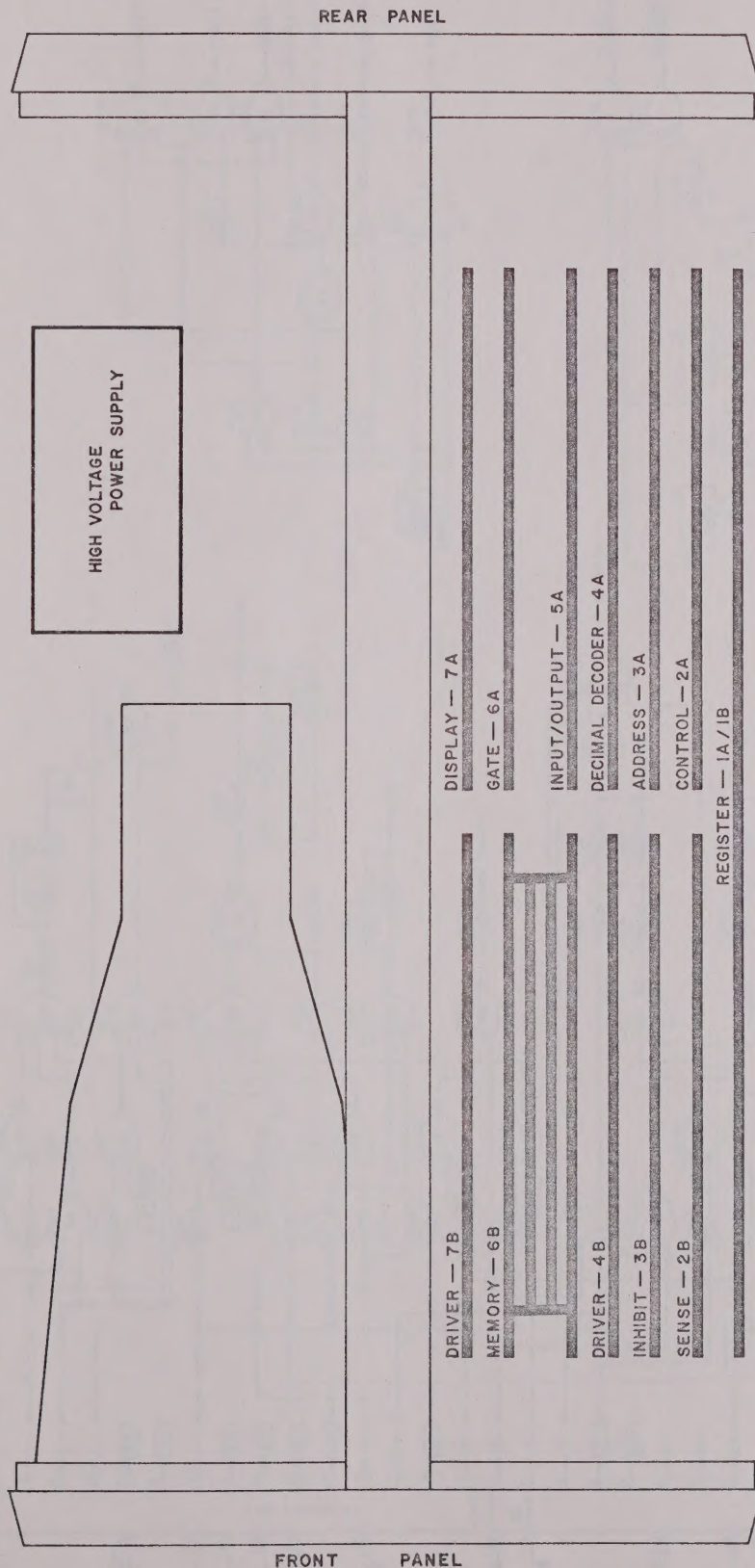
The boards and components are identified by the prefix in the tabulations; for example, 4B-3 refers to circuit board connector 4B, pin 3. The circuit diagrams may be used to determine which circuit board utilizes connector 4B.

The input plug-in unit is identified by the prefix PL-; the power supply by PS-; and the I/O connector on the rear panel by RP-.

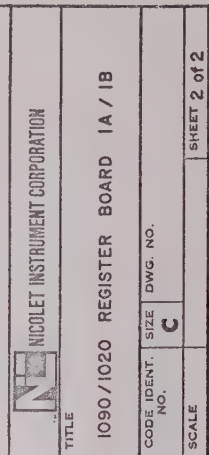
In the tabulations an entry such as:

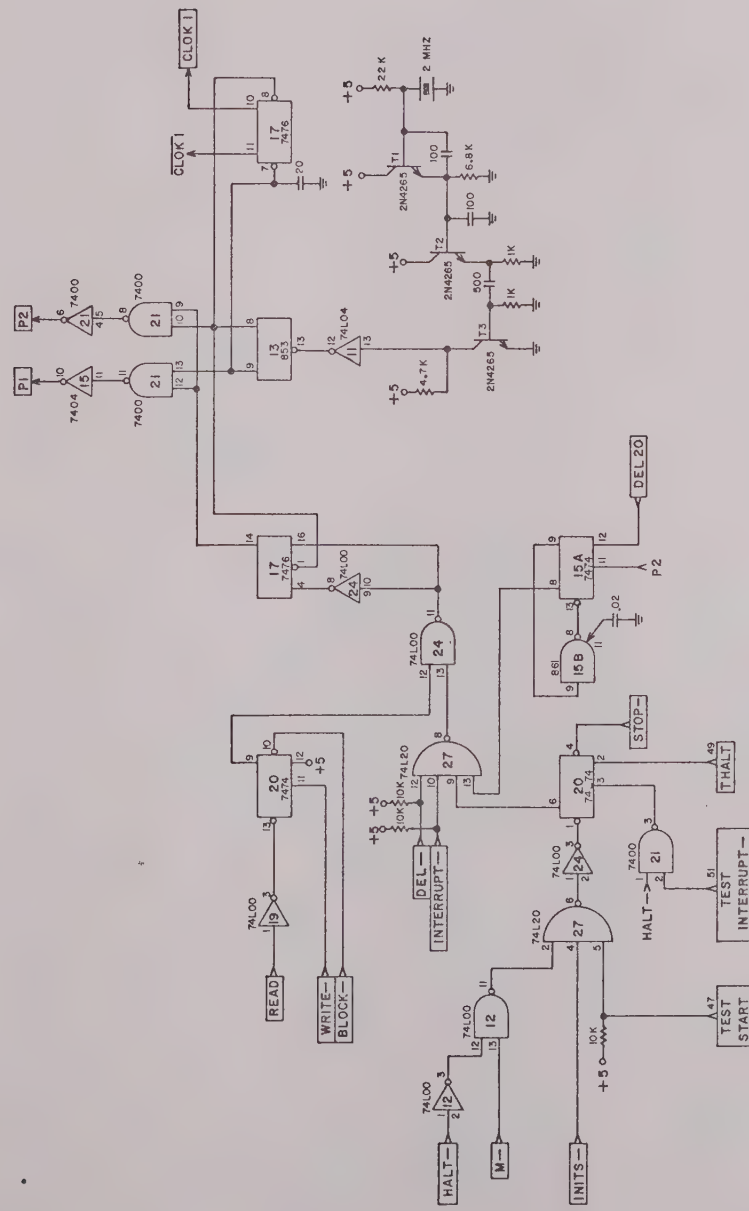
DSWPE 4A-10 5A-24 6A-61 7A-34

indicates that the signal DSWPE is wire-wrap connected between connectors 4A, 5A, 6A, and 7A at the numbered pins indicated. Each connector pin is numbered with small numerals on the bottom of the connector.



 NICOLET INSTRUMENT CORPORATION			
TITLE			
BOARD PLACEMENT DIAGRAM			
CODE IDENT. NO.	SIZE	DWG. NO.	
	C		
SCALE			SHEET 1 of 1





NICOLET INSTRUMENT CORPORATION

TITLE

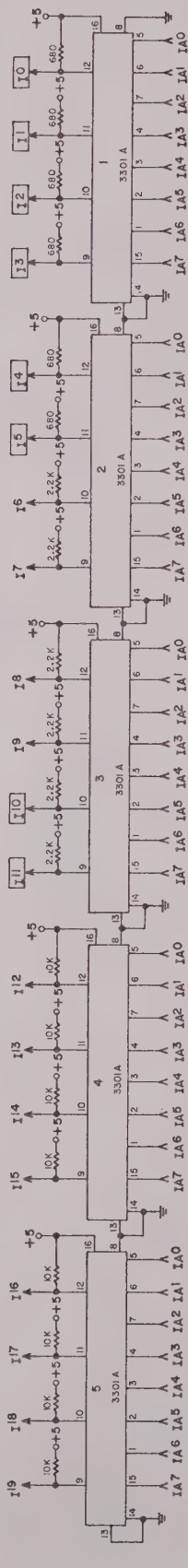
I090/I020 CONTROL BOARD 2A

CODE IDENT. NO. **C**

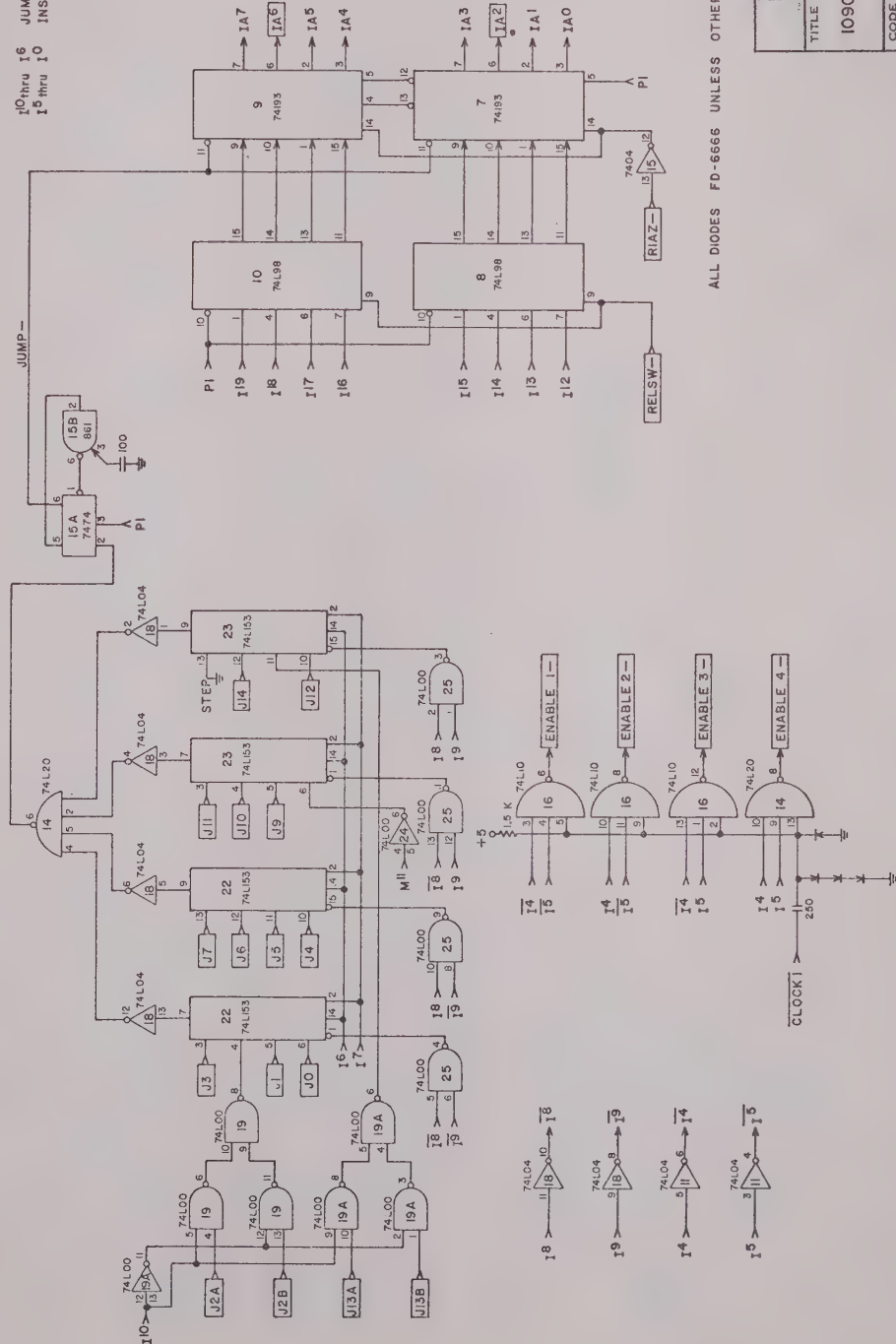
SIZE DWG. NO.

SCALE

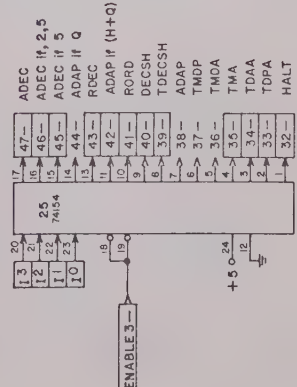
SHEET 1 of 2



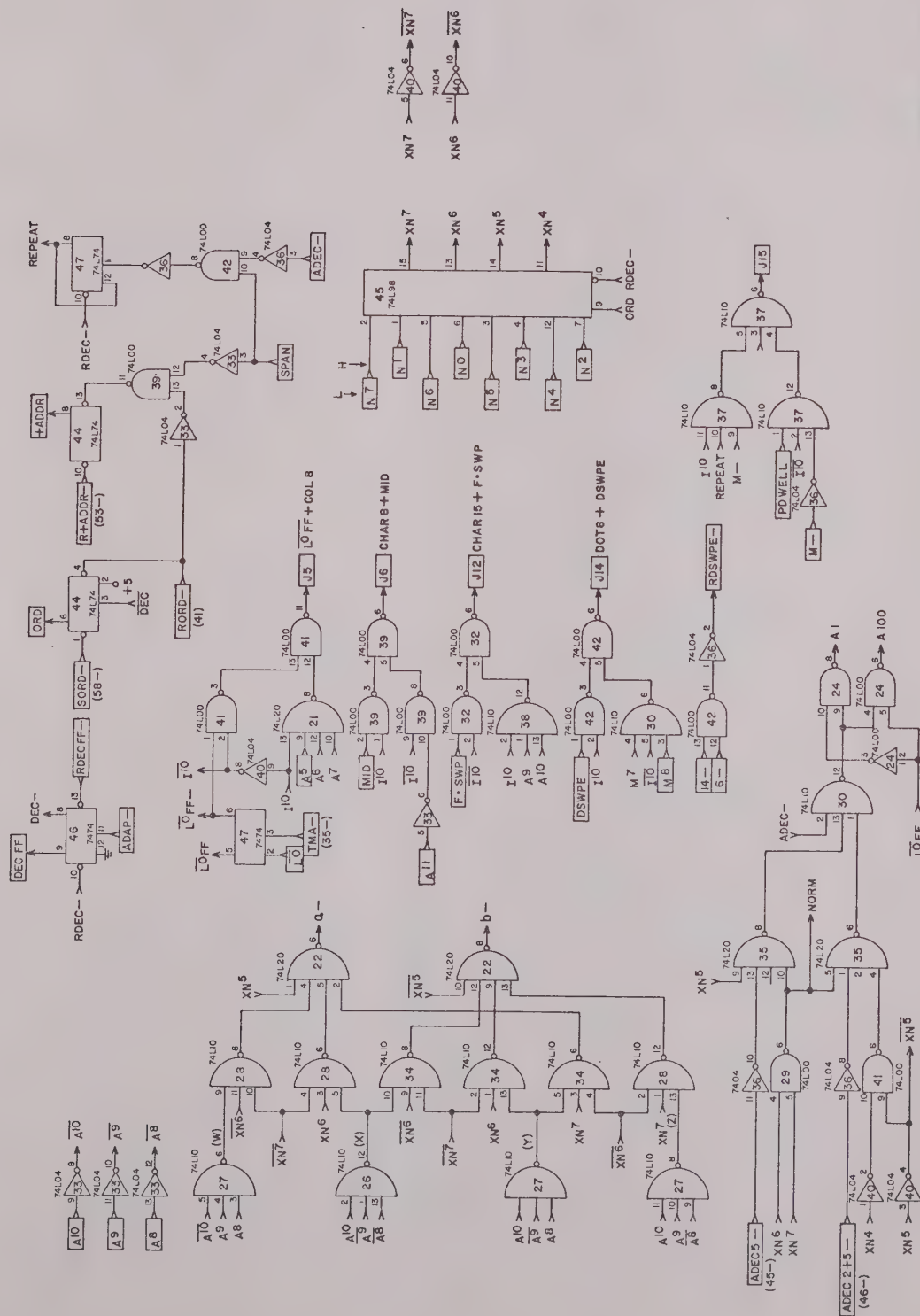
I¹⁹ thru I¹² JUMP DESTINATION
 I¹¹ BLANKING
 I¹⁰ thru I⁶ JUMP CONDITION
 I⁵ thru I⁰ INSTRUCTION



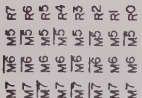
ALL DIODES FD-6666 UNLESS OTHERWISE INDICATED

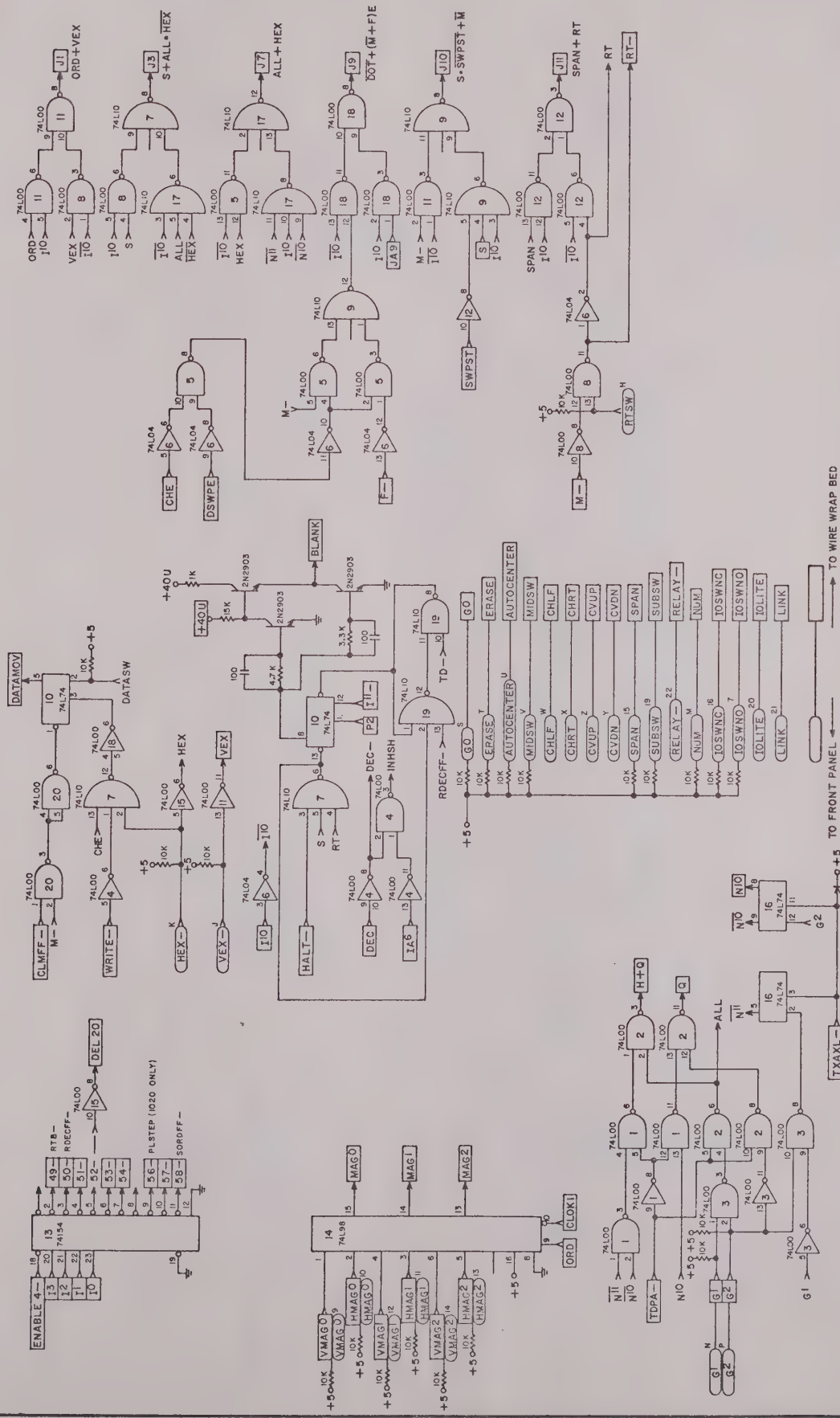


TITLE	1090/1020 ADDRESS BOARD 3A	
CODE IDENT. NO.	SIZE	DWG. NO.
	C	
SCALE	SHEET	

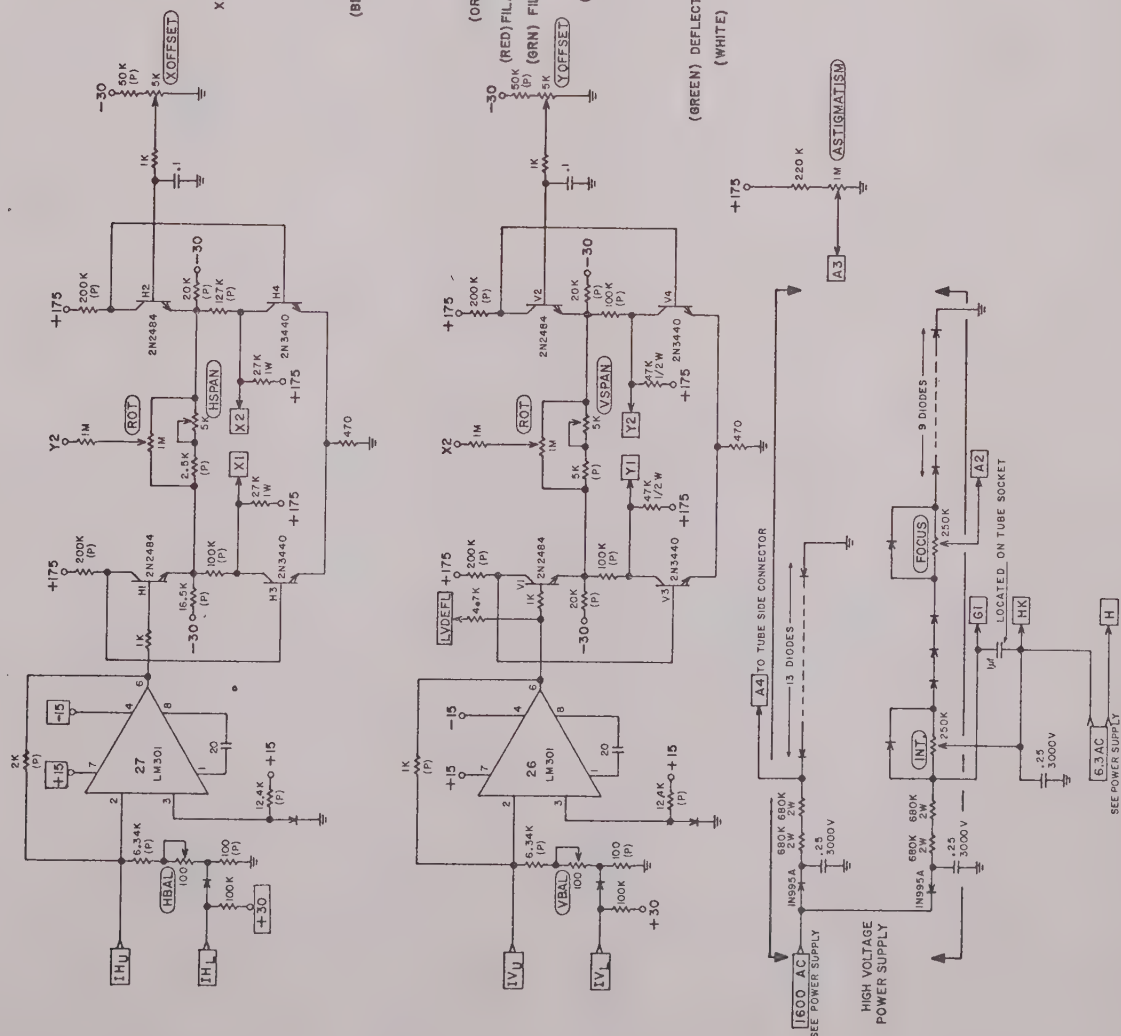
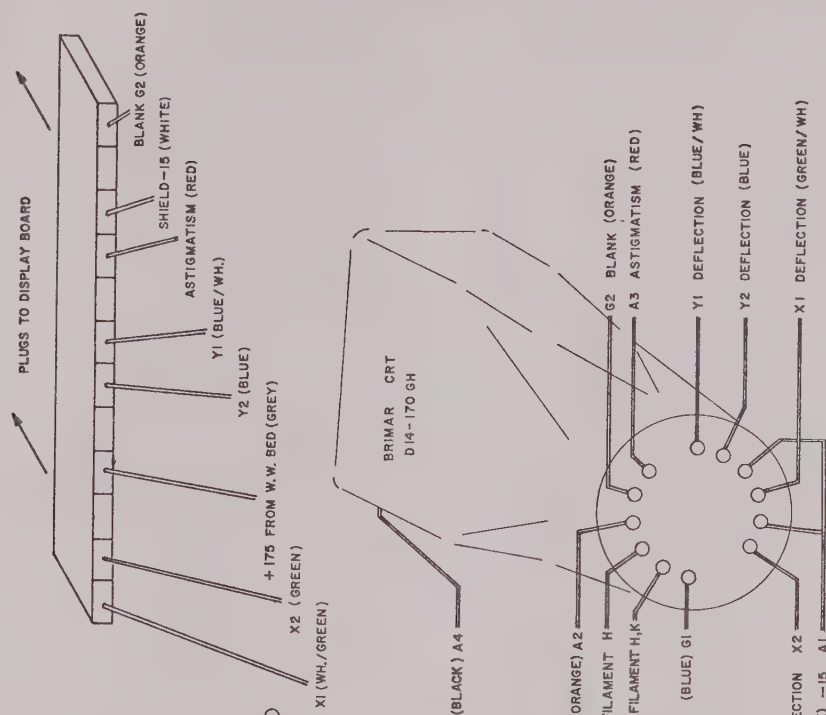


NICOLET INSTRUMENT CORPORATION	
TITLE	IO90/IO20 DECIMAL BOARD 4A
CODE IDENT. NO.	C
SIZE	DWG. NO.
SCALE	SHEET 1 of 2



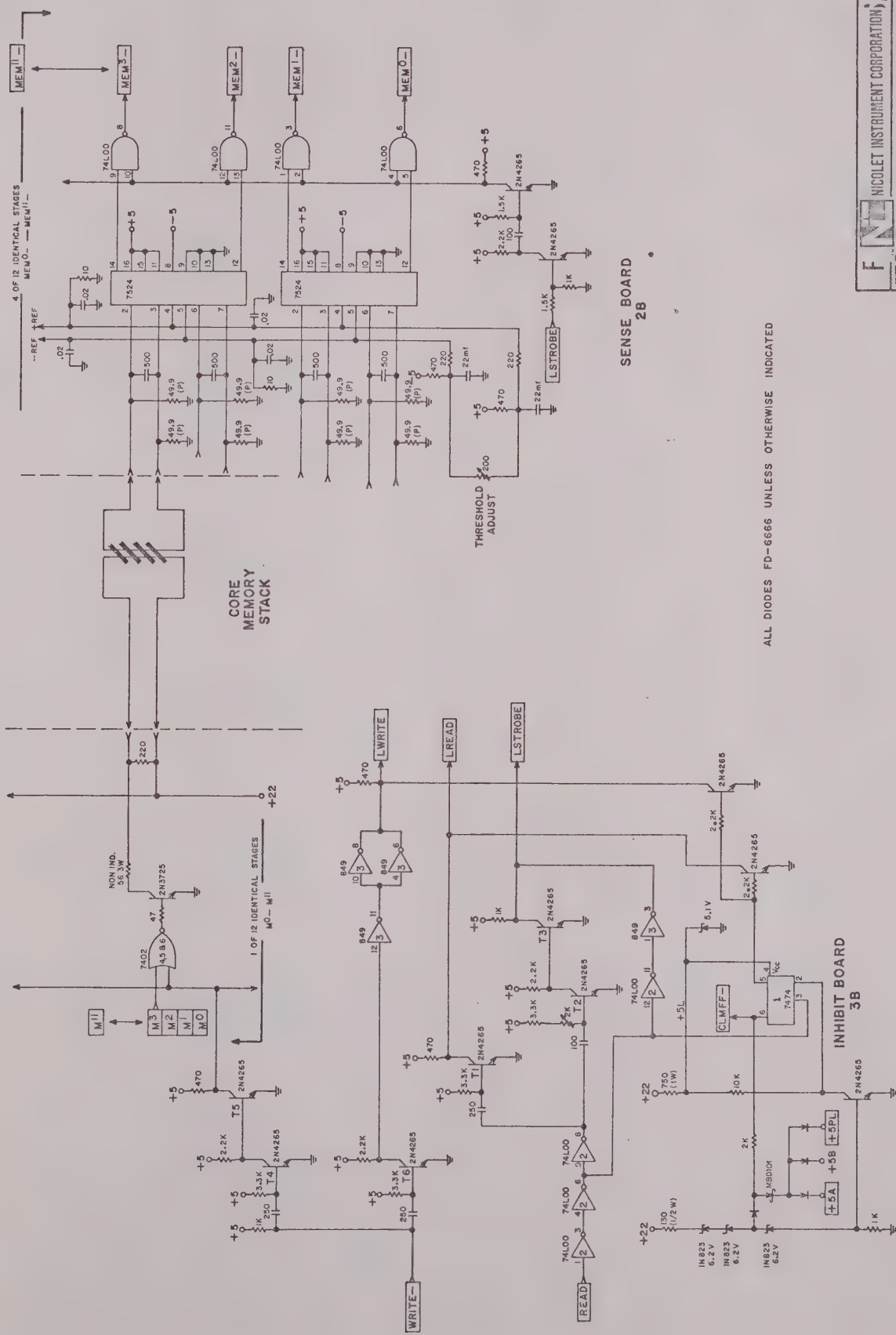


		NICOLET INSTRUMENT CORPORATION	
TITLE		1090/1020 GATE BOARD 6A	
CODE IDENT. NO.	SIZE	DWG. NO.	C
SCALE	SHEET 1 of 1		



ALL DIODES FD-6666 UNLESS OTHERWISE INDICATED

		NICOLET INSTRUMENT CORPORATION	
TITLE		1090/1020 DISPLAY BOARD 7A AND HIGH VOLTAGE POWER SUPPLY	
CODE IDENT. NO.	SIZE	DWG. NO.	
	C		
SCALE	SHEET 2 of 2		

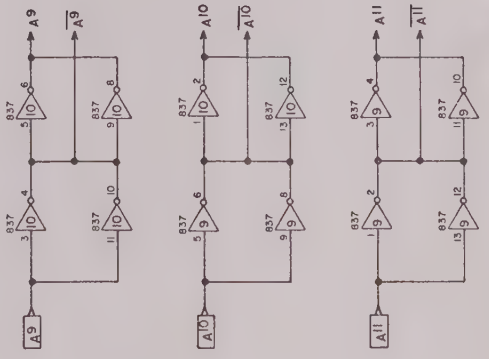
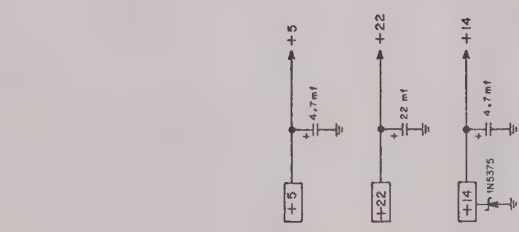
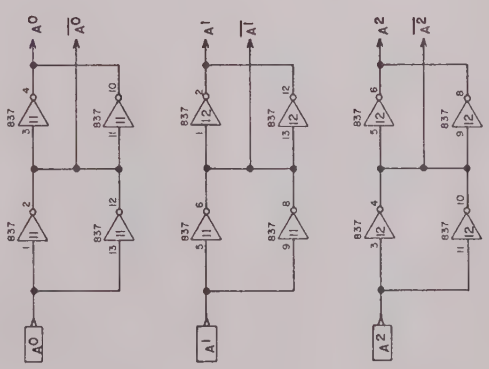
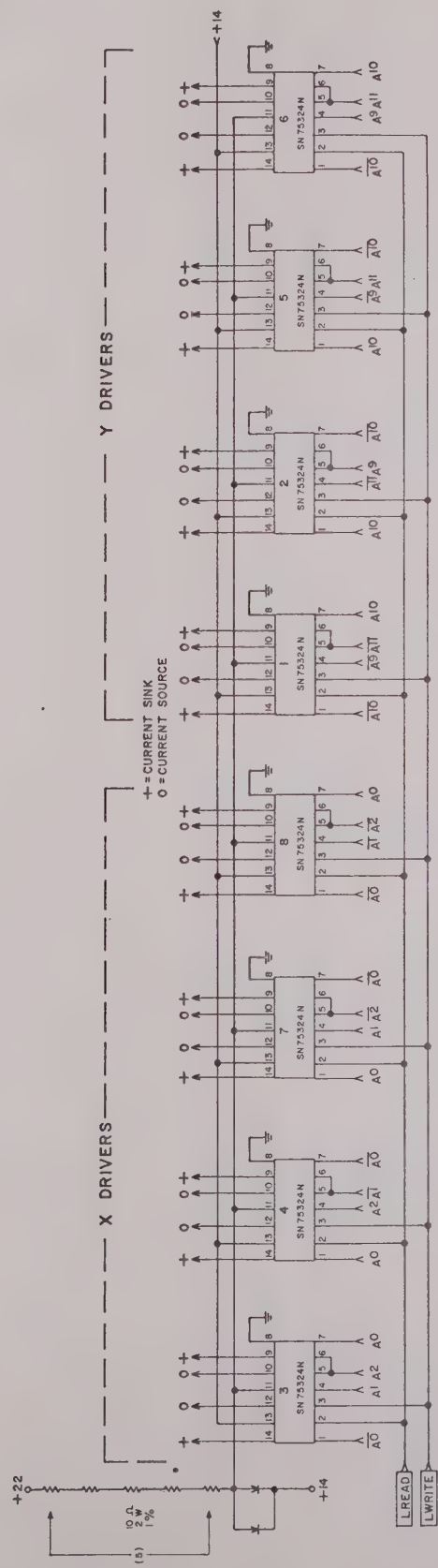


ALL DIODES FD-6666 UNLESS OTHERWISE INDICATED

SENSE BOARD
2B

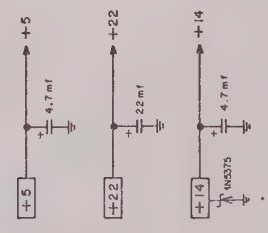
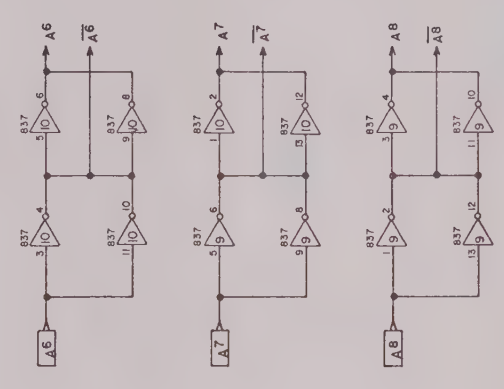
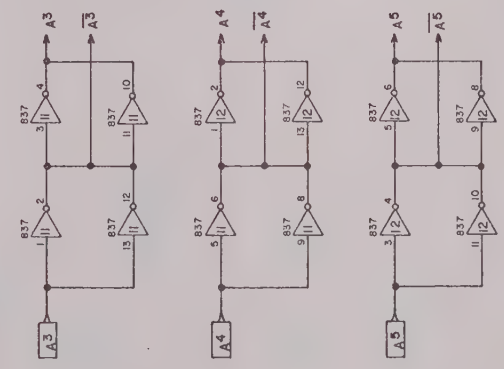
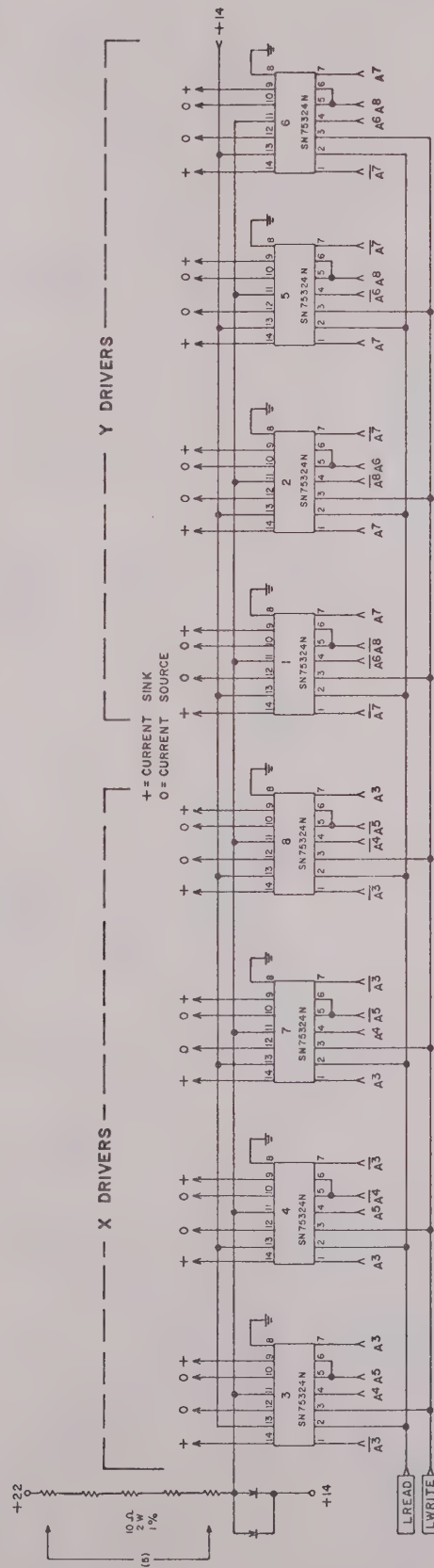
INHIBIT BOARD
3B

		NICOLET INSTRUMENT CORPORATION, INC.	
TITLE: 1090/1020 SENSE AND INHIBIT BOARDS 2B AND 3B			
DRAWN:	SIZE:	DWG. NO.:	C
DATE:	APPROVED:	SCALE:	SHEET 1 of 1



ALL DIODES FD-6666 UNLESS OTHERWISE INDICATED

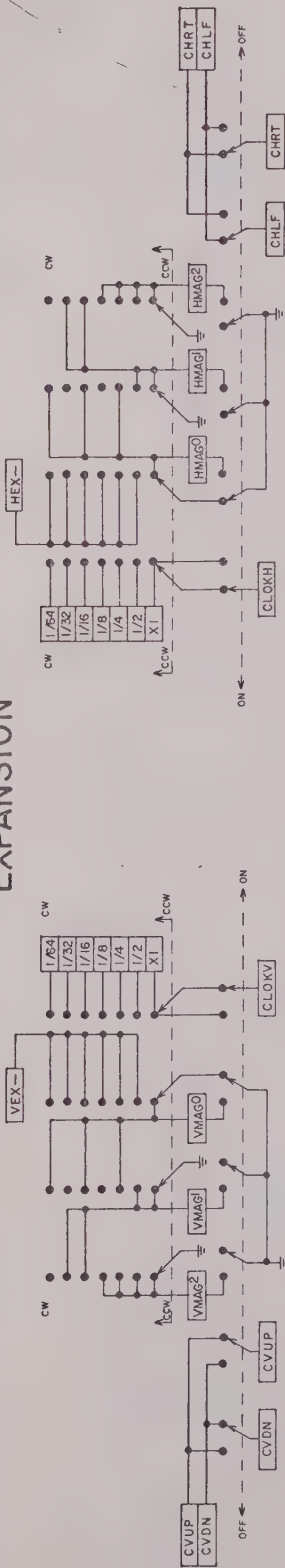
NICOLET INSTRUMENT CORPORATION	
TITLE	
1090/1020 MEMORY DRIVER 4B	
DESIGNED	SIZE DWG. NO.
DATE	C
APPROVED	SCALE
SHEET 1 of 1	



NICOLET INSTRUMENT CORPORATION	
TITLE	
1090/1020 MEMORY DRIVER 7 B	
DRAWN	SIZE DWG. NO.
DATE	C
APPROVED	SCALE
SHEET 1 of 1	

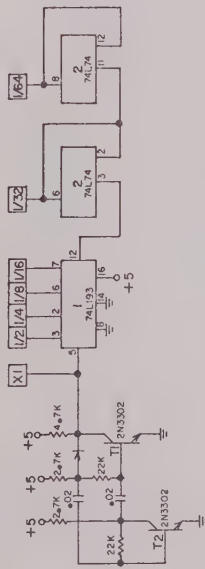
ALL DIODES FD-6666 UNLESS OTHERWISE INDICATED

EXPANSION

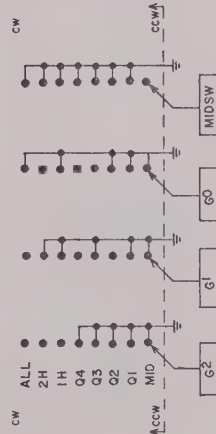


VERTICAL

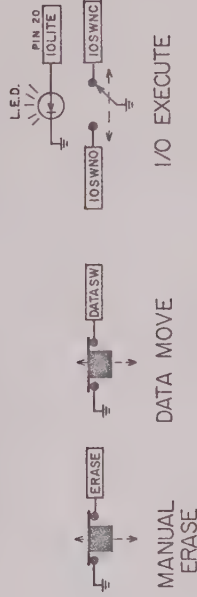
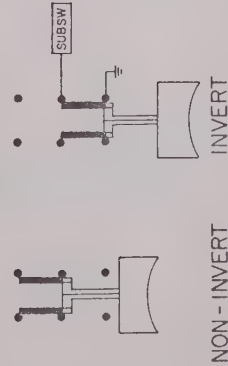
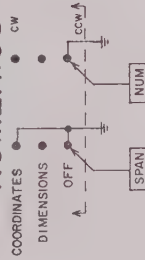
HORIZONTAL



MEMORY



NUMERICS



NICOLET INSTRUMENT CORPORATION

1090 / 1020 FRONT PANEL

SIZE DWG. NO.
C
SCALE
SHEET 1 of 1



1090 WIRE WRAP

A0	1A-36	3A-31	4B-3	
A1	1A-38	3A-33	4B-5	
A2	1A-42	3A-35	4B-7	
A3	1A-44	3A-37	7B-3	
A4	1A-73	3A-32	7B-5	
A5	1A-75	3A-30	4A-65	7B-7
A6	1B-4	3A-22	4A-69	7B-9
A7	1B-6	3A-20	4A-67	7B-11
A8	1B-36	3A-18	4A-75	7B-13 5A-26
A9	1B-38	3A-16	4B-9	4A-73
A10	1B-58	3A-14	4B-11	4A-61
A11	1B-60	3A-12	4B-13	4A-63
47- ADEC-	3A-54	4A-8		
45- (ADEC 5)-	3A-65	4A-3		
46- (ADEC 2+5)-	3A-67	4A-13		
38- ADAP-	3A-63	4A-33		
AUTOCENTER	1A-25	6A-12		
BLANK	6A-74	7A-75		
CHE	3A-8	5A-30	6A-54	
CHLF	1A-23	6A-8		
CHRT	1A-27	6A-6		
CLMFF-	3B-60	6A-3	PL-46	
CLOK1	2A-14	6A-17	PL-34	
CVDN	1A-21	6A-4		
CVUP	1A-18	6A-2		
DATAMOV	1A-15	6A-57		
DEC	4A-35	6A-69		
40- DECSH-	3A-55	4A-19		
DEL-	2A-8	5A-10		
52- DEL20-	2A-2	6A-70		
DSWPE	4A-10	5A-24	6A-61	7A-34
ENABLE #1-	1A-28	2A-12		
ENABLE #2-	1A-5	2A-16		
ENABLE #3-	2A-19	3A-58		
ENABLE #4-	2A-27	6A-49		
ERASE	1A-19	6A-14	PL-17	
F-	6A-63	PL-59		
F*SWP	4A-68	PL-63		
G0	3A-52	6A-16		
G1	3A-50	6A-32		
G2	3A-42	6A-30		
H+Q	3A-76	6A-75	PL-5	
32- HALT-	2A-6	3A-73	6A-9	PL-22
HMAG0	6A-20	7A-8		
HMAG1	6A-22	7A-12		
HMAG2	6A-26	7A-10		
I0	1A-20	2A-70	3A-66	6A-43
I1	1A-22	2A-68	3A-64	6A-45
I2	1A-24	2A-66	3A-62	6A-47
I3	1A-26	2A-64	3A-60	6A-51
I10	2A-57	4A-22	6A-33	
I11-	2A-55	6A-55		
IA6	2A-73	6A-73		
INHSH	6A-52	7A-6	7A-44	

INITS-	2A-3	PL-52				
IOLITE	5A-18	6A-5				
IOSWNC	5A-14	6A-13				
IOSWNO	5A-16	6A-11				
J1	2A-46	6A-42				
J2A	2A-23					
J2B	2A-25					
J3	2A-42	6A-58				
J4 +ADDR	2A-52	4A-56				
J5	2A-50	4A-20				
J6	2A-48	4A-64				
J7	2A-44	6A-71				
J9	2A-32	6A-65				
J9A	6A-56	4A-70				
J10	2A-30	6A-48				
J11	2A-28	6A-27				
J12	2A-24	4A-66				
J13A	2A-5					
J13B	2A-7	PL-10				
J14	2A-26	4A-12				
J15	2A-29	4A-15				
L0-	1A-54	4A-21				
LREAD	3B-19	4B-17	7B-17			
LSTROBE	2B-44	3B-23				
LWRITE	3B-33	4B-15	7B-15			
LHDEFL-	7A-5	PL-39				
LVDEFL-	5A-41	7A-76	PL-2			
M-	2A-1	4A-57	6A-67	PL-50		
M0	1A-60	3A-47	5A-3	7A-7	3B-6	PL-75
M1	3B-8	1A-62	3A-43	5A-9	7A-9	PL-69
M2	3B-10	1A-56	3A-41	5A-15	7A-11	PL-61
M3	3B-12	1A-66	3A-36	5A-21	7A-13	PL-57
M4	3B-14	1A-64	3A-25	5A-27	7A-15	PL-49
M5	3B-16	1A-58	3A-26	4A-71	5A-33	7A-17 PL-47
M6	1B-16	3B-64	3A-23	4A-16	5A-5	7A-67 PL-45
M7	1B-26	3B-66	3A-19	4A-76	5A-11	7A-69 PL-43
M8	1B-24	3B-68	3A-13	4A-1	5A-17	7A-71 PL-38
M9	1B-18	3B-70	3A-9	5A-23	7A-74	PL-36
M10	1B-20	3B-72	3A-7	5A-29	7A-72	PL-28
M11	1B-22	3B-74	2A-34	2A-38	3A-3	5A-35 4A-74
	4A-74	7A-70	PL-24			
MAG0	1A-11	6A-25				
MAG1	1A-9	6A-23				
MAG2	1A-7	6A-21				
MEM0-	2B-4	5A-45				
MEM1-	2B-6	5A-47				
MEM2-	2B-20	5A-49				
MEM3-	2B-22	5A-51				
MEM4-	2B-34	5A-53				
MEM5-	2B-36	5A-55				
MEM6-	2B-48	5A-57				
MEM7-	2B-50	5A-59				
MEM8-	2B-60	5A-61				
MEM9-	2B-62	5A-64				
MEM10-	2B-70	5A-66				
MEM11-	2B-72	5A-68				

